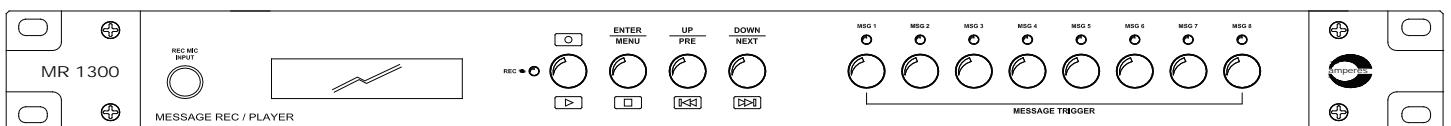


# MR 1300

## MESSAGE RECORDER / PLAYER



## INSTRUCTION MANUAL



VER.1 / JAN 2012

## Introduction

Thank you for trusting another product from Amperes, a brand of emerging preference.

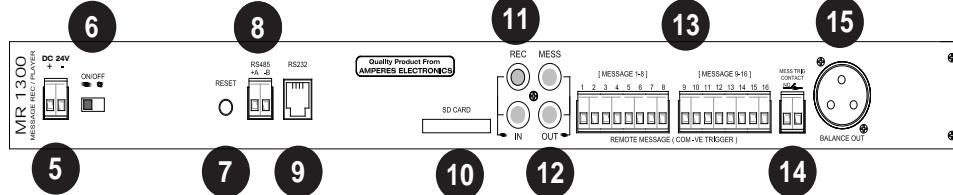
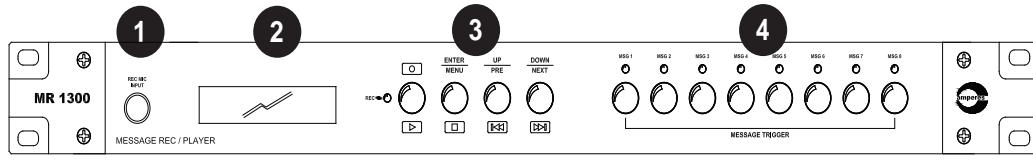
MR1300 has been added to the list of product range after much researches were done on the needs and wishes of the users throughout the years. We had added enough functions and flexibilities over the operations for the requirement of PA installations and this product shall be able to cater for any size of installations.

Among distinctive features available in MR1300 shall the storage of voice file in SD card which can support to 2 GB capacity, which is more than enough for most operations, front and rear message triggering of up to 16 messages and choice of recordings, via the front jack for microphones as well as rear line input RCA jacks. MR1300 shall not be a static product, but upgradable through bootloader for newer version of firmware that may be issued in future.

We trust that MR1300 shall perform beyond your expectations and it shall be the right choice to install one in your system, working tirelessly for years to come.

## Parts Identification

Front View



Rear View

### 1. 1/4" STEREO PHONE JACK

Stereo phone jack for microphone inputs with balanced input signal. Used for recording voice to the unit.

### 2. LCD DISPLAY

2 X 18 character LCD displaying units parameters and programming instructions.

### 3. CONTROL BUTTONS

Buttons for Menu and various playback and recording controls

### 4. FRONT MESSAGE ACTIVATION SHORT KEY

8 front short key for direct message activation ; MES 1 to MES 8 with LED indicators.

## Parts Identifications ( continued )

### **5. POWER CONNECTORS**

24V DC input for power, use only regulated power supply or Amperes PS9400 power supply unit.

### **6. POWER SWITCH**

Power switch for the unit.

### **7. RESET BUTTON**

Button for resetting the unit to factory default. Use only when required as settings done previously would be lost. Voice files stored in the SD card shall not be affected.

### **8. RS485 DATA CONNECTIONS**

RS485 data port for external controls and monitoring.

### **9. RS232 DATA PORT**

RS232 data port for interfacing to PC for firmward upgrades.

### **10. SD CARD**

SD card slot, up to 2 GB capacity is supported by the unit ( Shall be upgraded in future )

### **11. LINE INPUTS**

RCA jack for recording from external source with line output, such as CD, MP3 players, etc

### **12. LINE OUTPUTS**

Unbalanced line output for message playback.

### **13. EXTERNAL TRIGGER PORT**

Dry contacts to trigger the stored messages 1 to 16. Only voltage free contact is allowed to avoid damage.

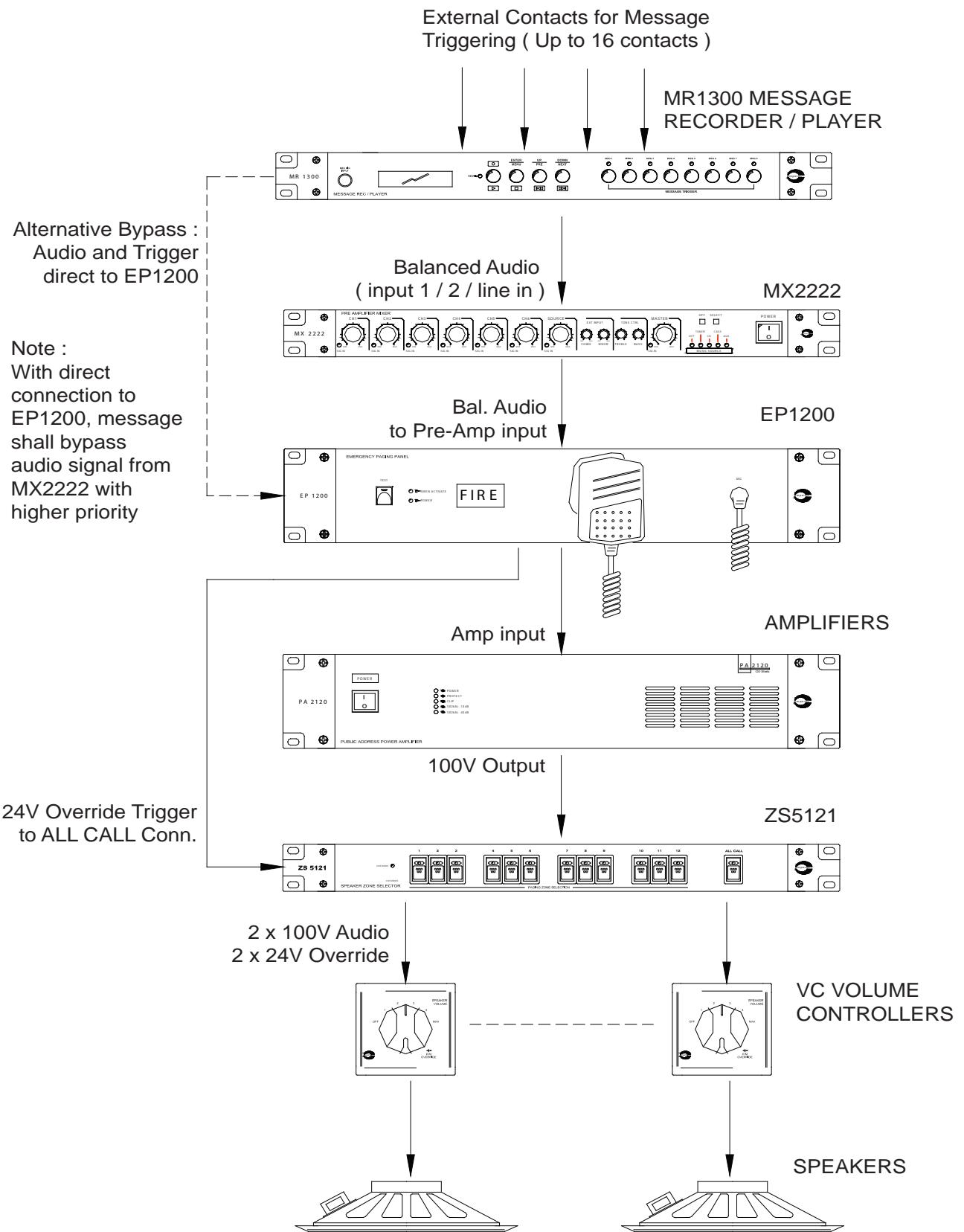
### **14. DRY CONTACT**

Dry contact is available whenever a message is activated. Can be used to interface with other devices such as volume controllers, zone selectors, etc.

### **15. XLR BALANCED OUTPUT**

Balanced line output with XLR female connector.

## Schematic Diagram



## Connecting the Unit

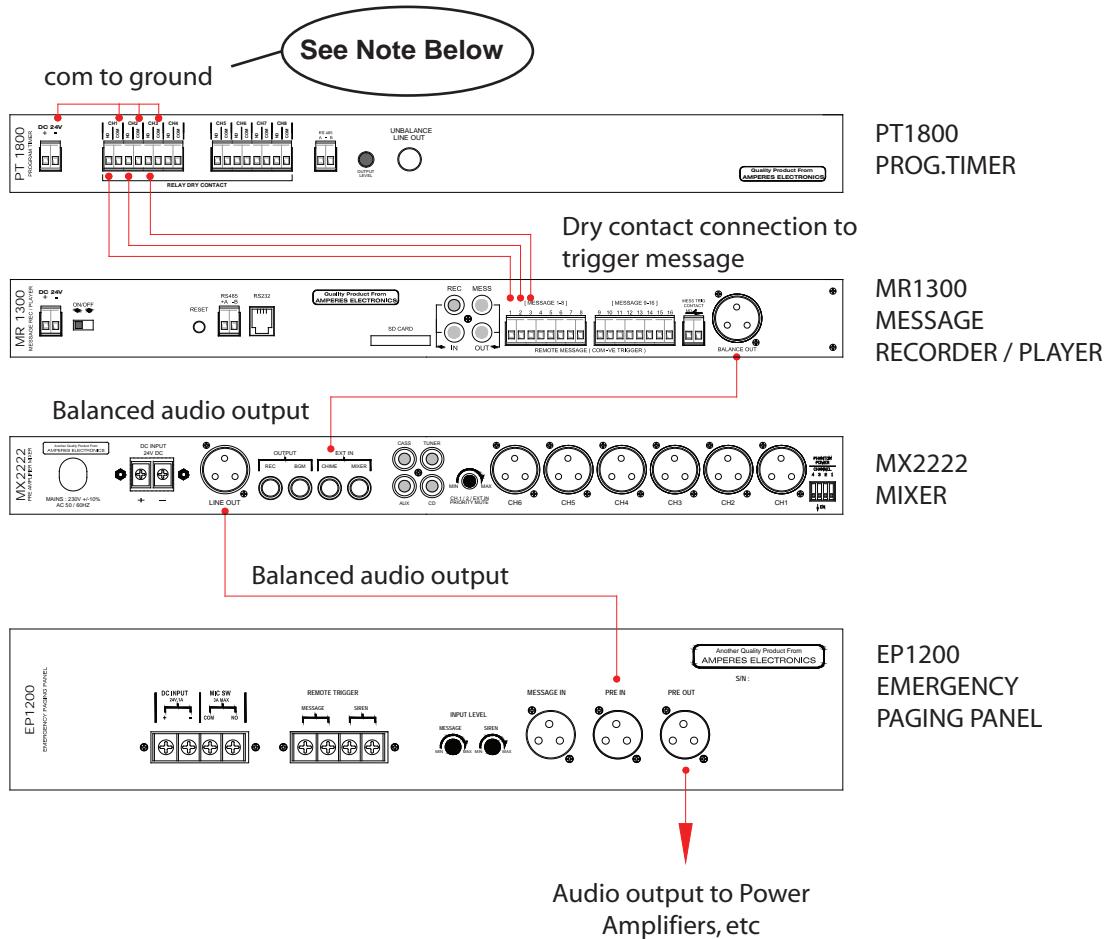
MR1300 can be used as :

- source playback unit, for delivering pre-recorded messages or songs, and if repetitive playback at certain times is required, it can be used together with a timer.

- Emergency broadcast message playback unit, which is linked to external triggering devices or systems, such as alarm, BAS or emergency push button.

Connections of both applications are shown in the diagrams below.

### Option A : Using MR1300 for Normal Message Source



Stored messages can be played either from the front buttons or via the remote triggering ports.

The above diagram shows connections of 3 output channels of PT1800 connected to 3 individual triggering ports of MR1300. It is intended to perform 3 different times to playback 3 different messages. Activation of each message is via negative grounding.

Output from MR1300 can be unbalanced using RCA jack, or balanced signal using XLR jack. Both outputs are in mono mode, with line level signal.

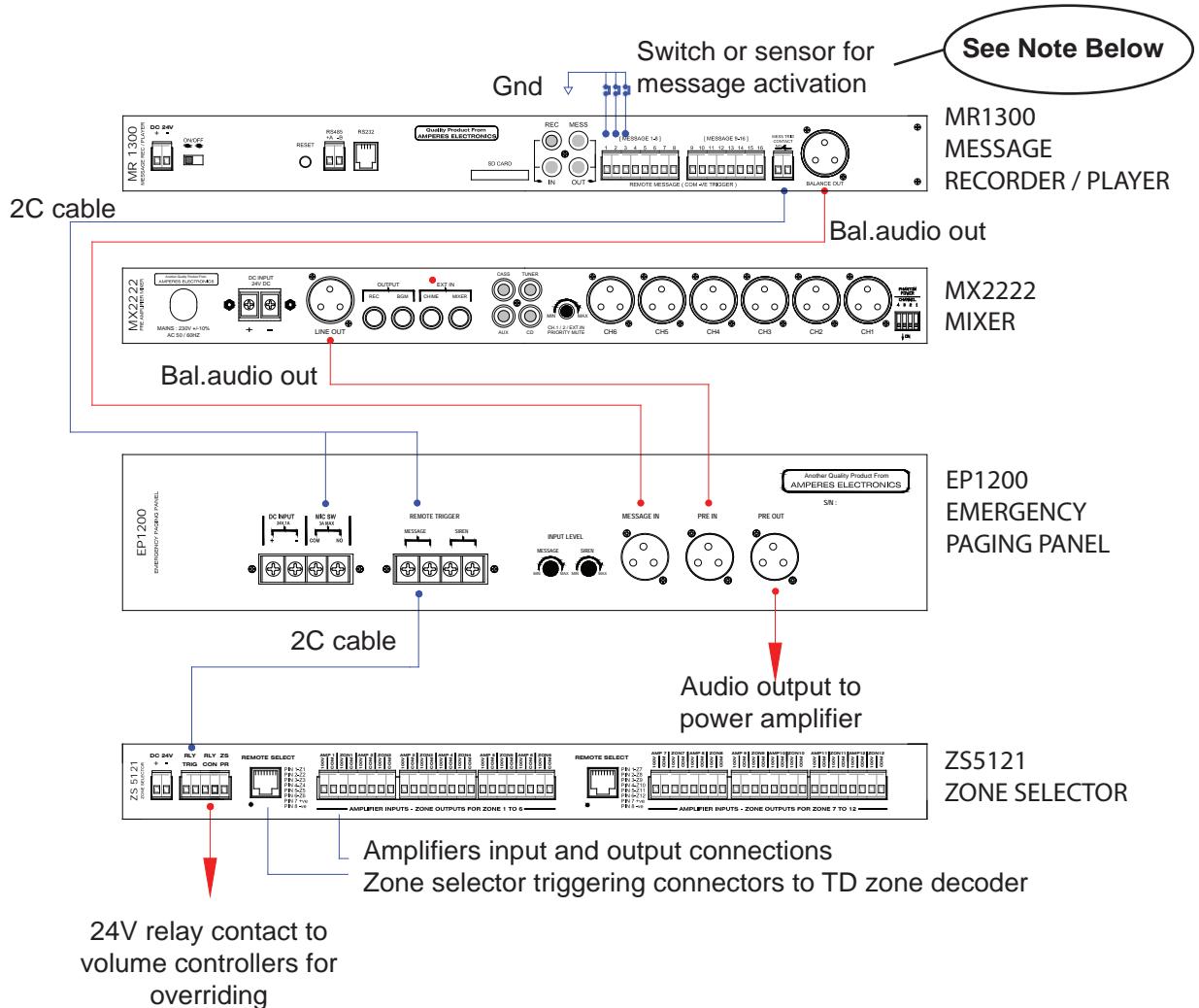
### NOTE :

Activation of a stored message shall can be either momentarily or pulse contact to ground. To activate from PT1800 timer, we recommend that the contact option at the channel output to be set to Pulse.

## Connecting the Unit

### Option B : Using MR1300 for Emergency Announcement

MR1300 can be used as essential message source to PA system, linked to external activation device such as BAS system, emergency push button, etc.



The dry contact at the MR1300 is used to trigger EP1200, thus overriding the normal audio source for priority paging. It is then also connected to the Emergency Relay trigger at the Zone Selector, providing a dry contact for connecting 24V DC to override external volume controllers

#### NOTE :

By default, the mode of activation is momentarily. For this configuration, set it to momentarily, and the dry contact shall be closed for the duration of the playback. This shall perform bypass of mixer audio output at EP1200 until the message is stopped.

#### Triggering Pre Recorded Message via UART ( RS485 )

MR1300 allows remote message activation via RS485 through the port available at the rear panel. This feature, please enquire from us for further technical details.

Upgrading of firmware is also made possible via the RS232 port. Any new firmware updates notification shall be posted from time to time.

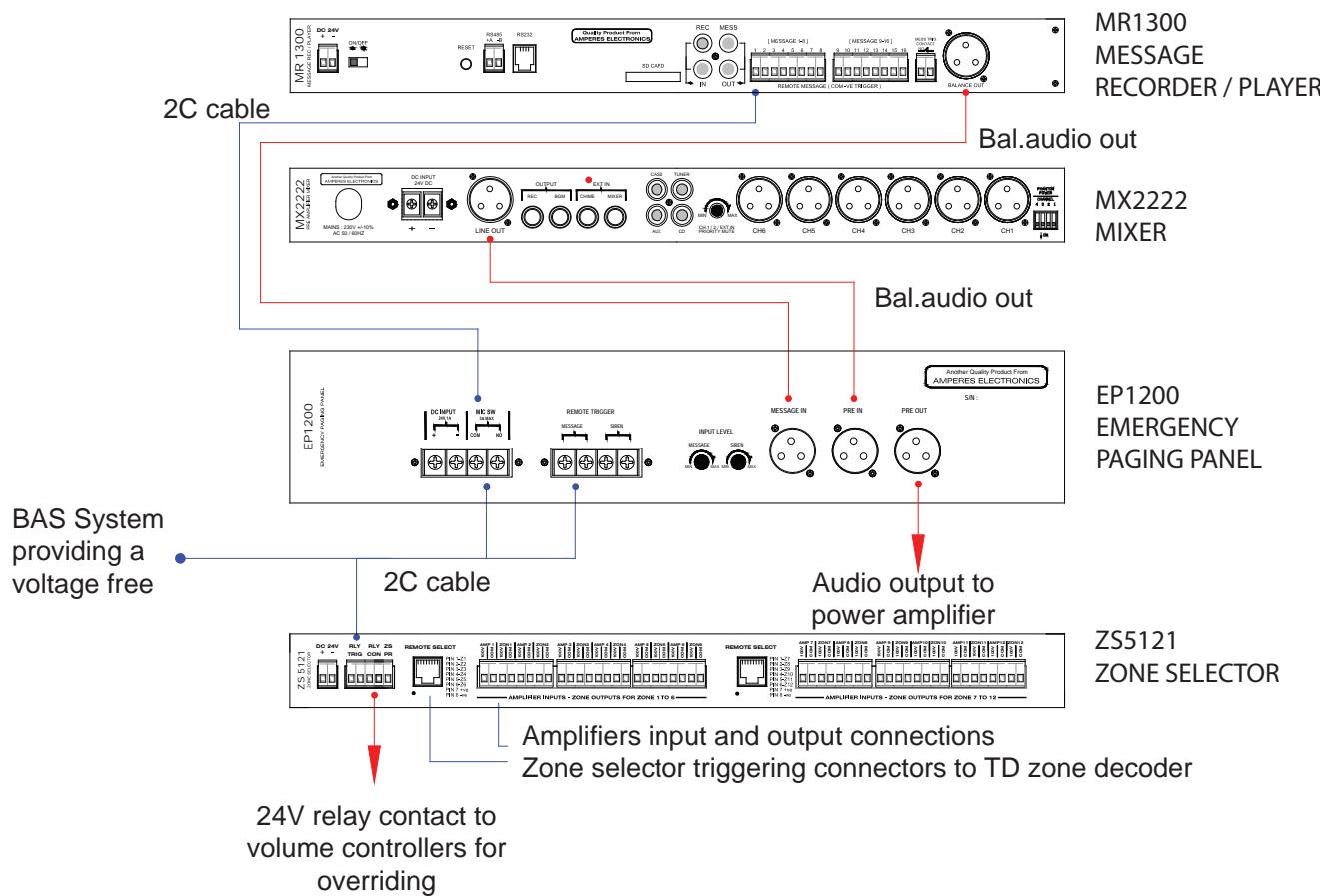
## Connecting the Unit

### Option C : Using BAS to control MR1300

In cases where Building Control System or BAS to be the domain controller including emergency voice announcement, it can be used to activate particular pre-recorded messages at MR1300.

The BAS would provide a close dry contact, which would activate mixer audio bypass at EP1200, as well as triggering a message at MR1300.

The typical connection diagram is illustrated below :



As EP1200 requires a latched contact to bypass the mixer output audio, BAS system should be able to provide a latched contact for the duration of the event.

Example, a fire sensor is activated and the BAS pick up the distress signal, it then provides a close contact, which is then required to mute normal BGM through EP1200. In the same time, activate a warning message via MR1300. The message shall be repeated until inspection is done and distress status is removed.

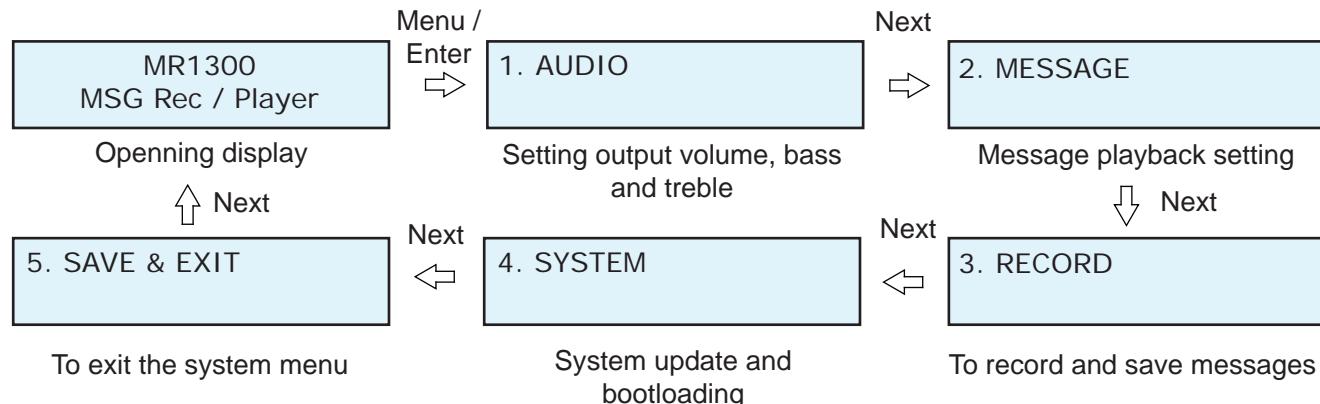
# Setup Menu

Few simple setting should be done to the unit before operating. Among them,

1. Activation mode ( momentary or latched )
2. Audio level and tone controls
3. Message designations

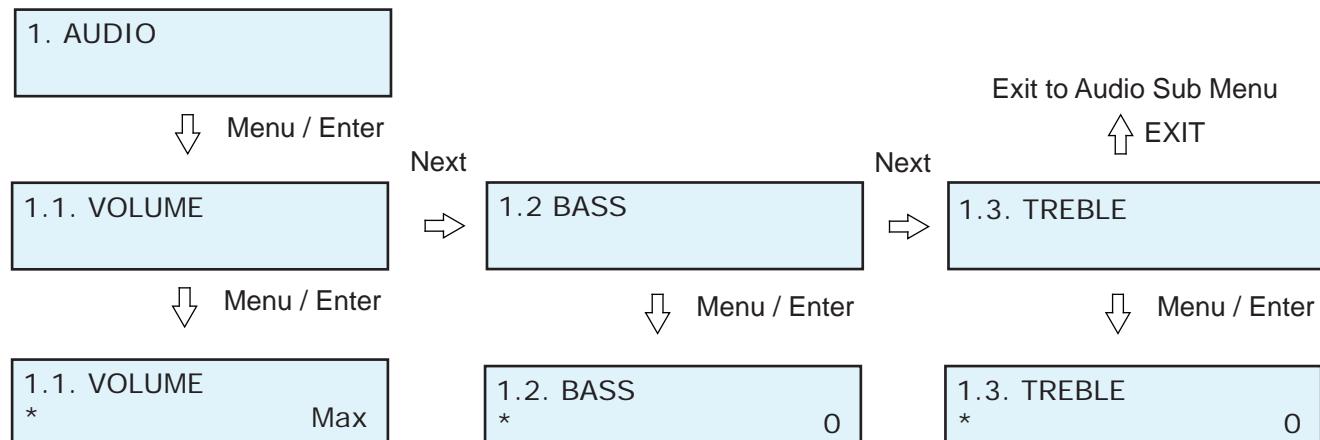
The setting up can be performed via the menu, or through PC ( software shall be available soon ).

## The Menu Flowchart :



## 1. Audio Sub Menu

It is used to set the output volume, bass and treble of pre-recorded messages.



Use Next or Prev button to select the volume level ; from Mute to 8 and Max.

Once selected, press Enter and the display shall return to Volume sub menu.

Use Next or Prev button to select the bass level ; from 0 to 6

Once selected, press Enter and the display shall return to Bass sub menu.

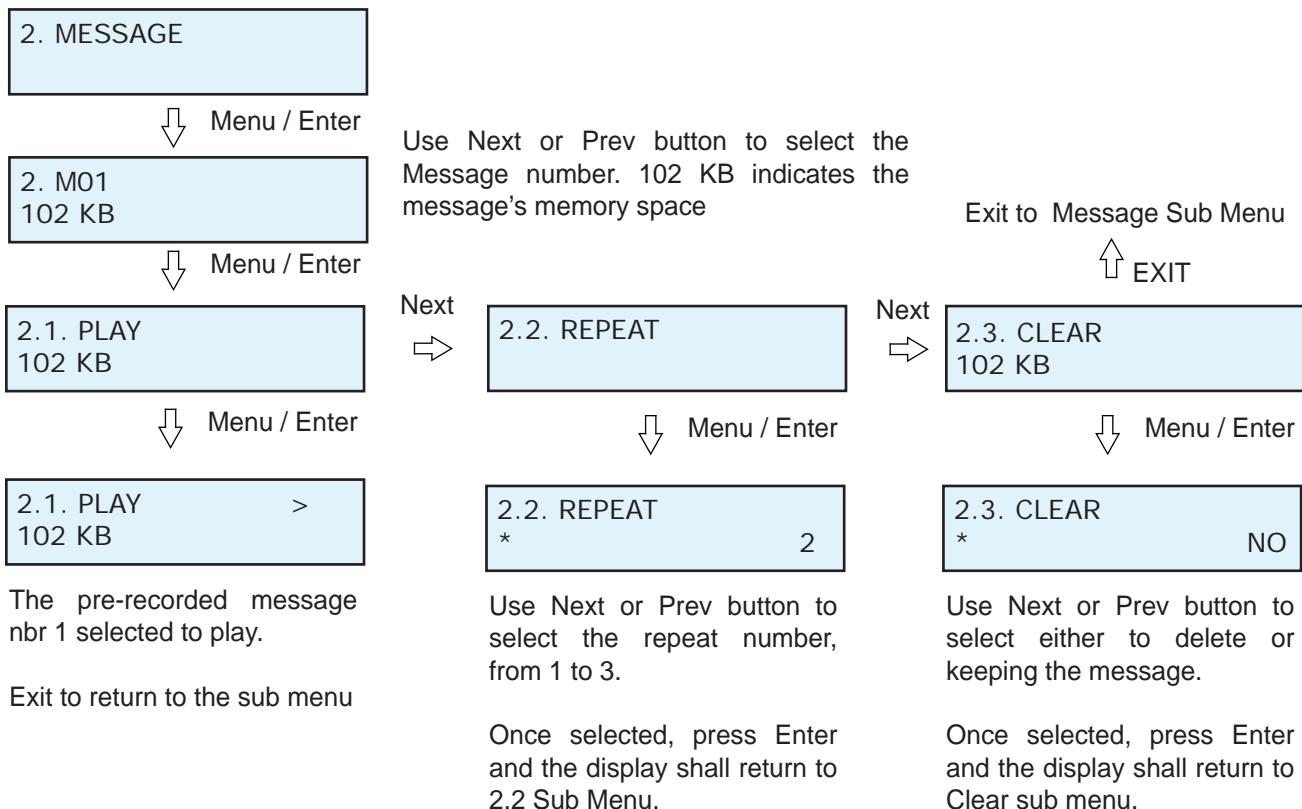
Use Next or Prev button to select the treble level ; from 0 to 6

Once selected, press Enter and the display shall return to Treble sub menu.

## Setup Menu

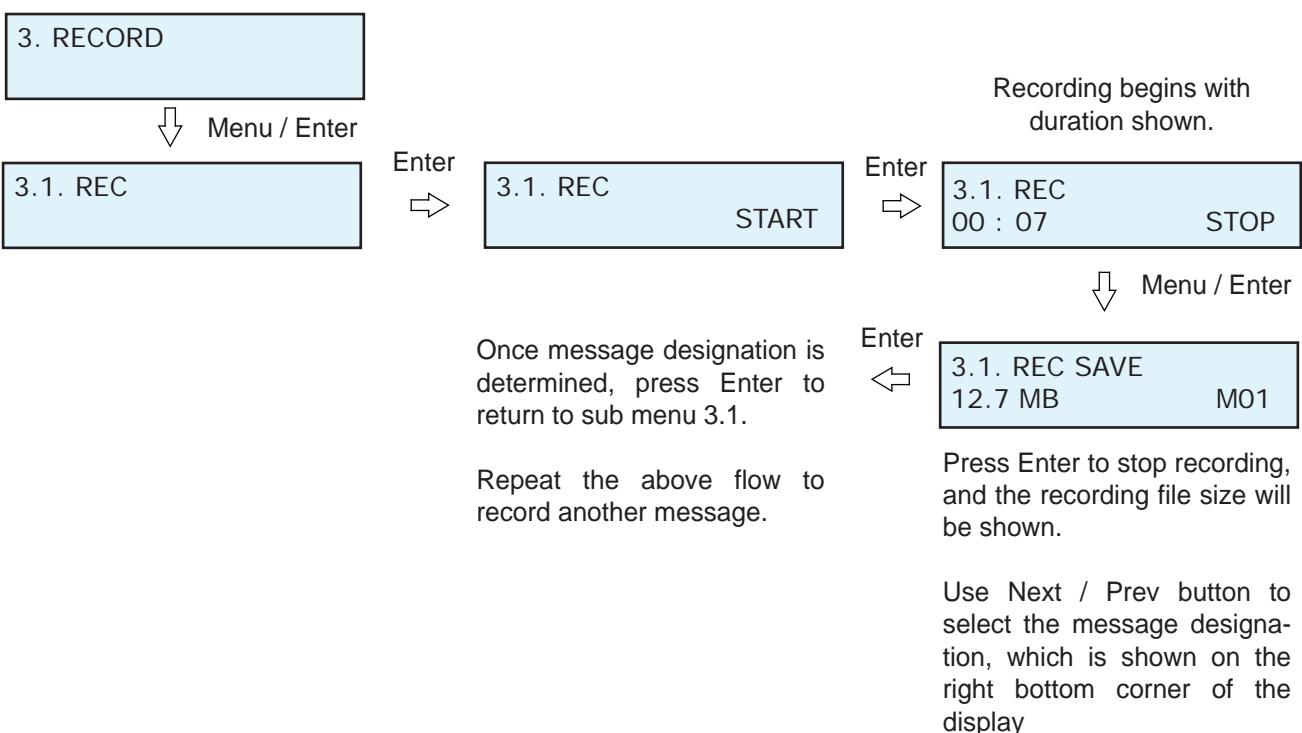
### 2. Message Sub Menu

Pre-recorded message setting is done using this sub menu.



### 3. Record Sub Menu

This sub menu is used to record voice via the front microphone or through rear RCA jack. Also refer to section "Recording Message".

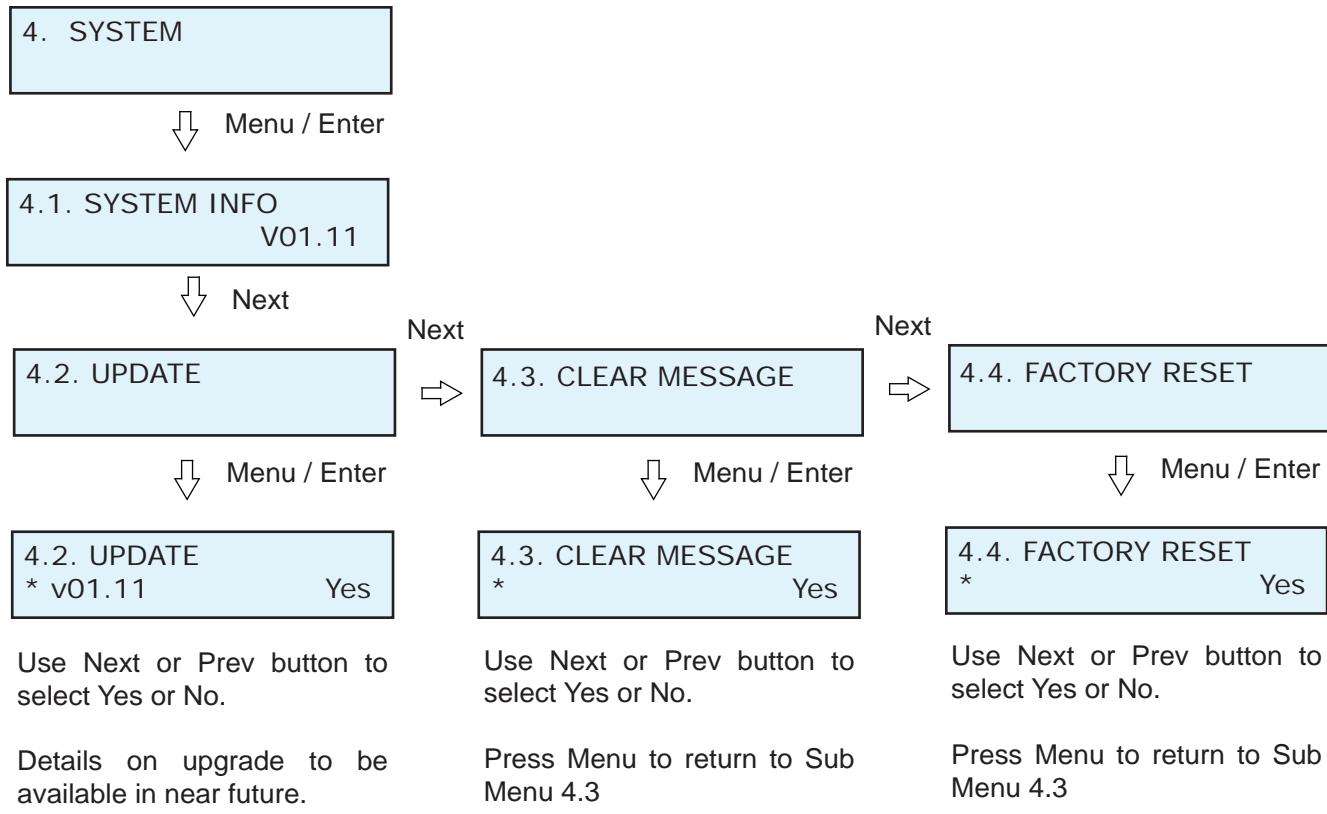


## Connecting the Unit

### 4. System

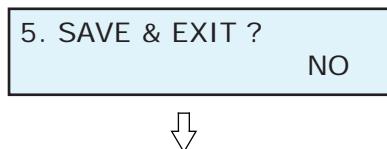
This menu is used to check the firmware version and bootloading for firmware upgrade.

Note : Firmware upgrade featur would be available in future.



### 5. Save and Exit

Enter this sub menu to return to operating mode.



Use Next or Prev button to select Yes or No.

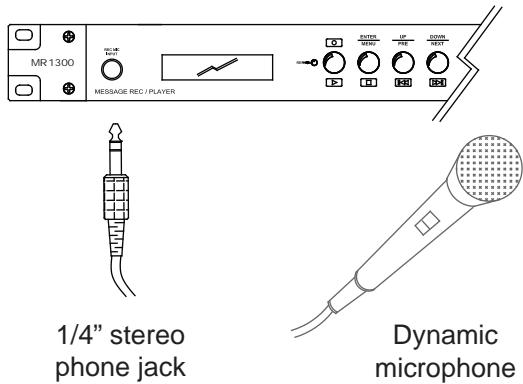
Yes is to save any changes made and return to operating mode.

## Recording a Voice File

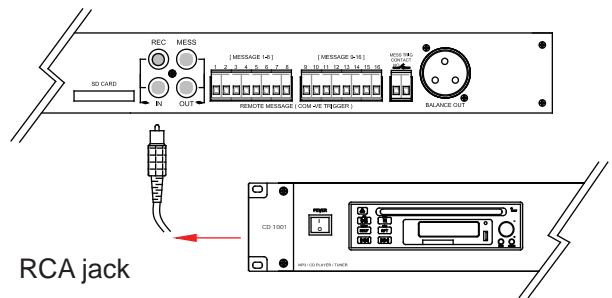
Recording a voice file can be done in two ways, being

1. Direct voice recording microphone / line input from music player and
2. Saving a voice file directly into SD card and rename it accordingly.

### Option A : Direct voice recording



Recording using dynamic microphone through front panel phone jack.



Line output audio source :  
CD / PC Output / MP3

Recording using external line audio source with  
RCA jack at rear of the unit

To perform this option of recording,

1. Select the appropriate type of audio source ; either using dynamic microphone or line audio source
2. Select Menu 3.0 Record and select the sub menu 3.1 ( Also see the section of Setup the Unit - Menu )
3. Press to Start recording and talk through the microphone or start the music source
4. Press Enter to stop the recording
5. In the next sub menu, select the Message number.
6. Exit the sub menu.

The direct recording of voice shall be saved into the SD card through PCM coding. The quality is best for voice and it is suitable for music. To obtain a high quality music playback, we recommend using the Option B of saving file method, which is explained in the next section.

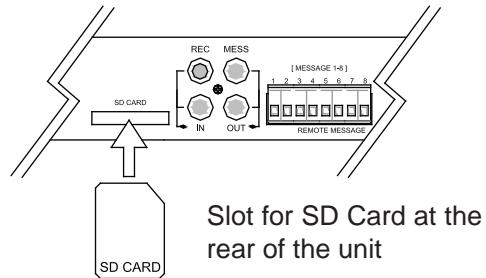
## Saving Files Directly Into SD Card

MR1300 allows various format of files for playback, such as MP3, WMA and etc. Saving a high quality of audio format, such as MP3 would produce better sound output, especially for music files.

As currently MR1300 only perform PCM coding for direct recording, we recommend that music file to be directly stored into the SD card, in order to obtain a reasonable quality of audio output.

A few simple steps to save files into SD Card :

1. Insert a SD card provided into Card Reader which is connected to your PC via USB port.
2. From source window, drag the audio file to destination window with SD card. Repeat for other files
3. Rename the transferred files to enable it to be recognised by the Message Recorder.



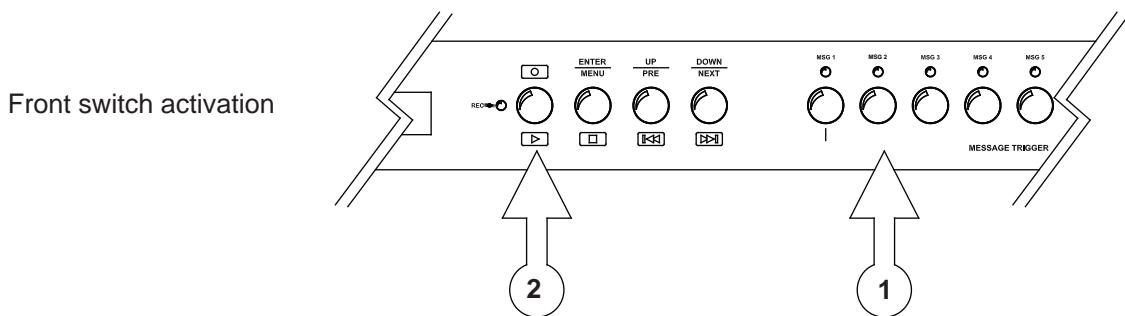
Slot for SD Card at the rear of the unit

Note :

MR1300 only recognise the first 3 digits of the file name, such as M01, M02 and so forth. Other extensions can be used as reference. Thereby any file name must be renamed according to the message location.

## Message Playback

Stored voice file can be played by using the front direct switches ( Message 1 to 8 ) or via the remote triggering ports ( Message 1 to 16 ).



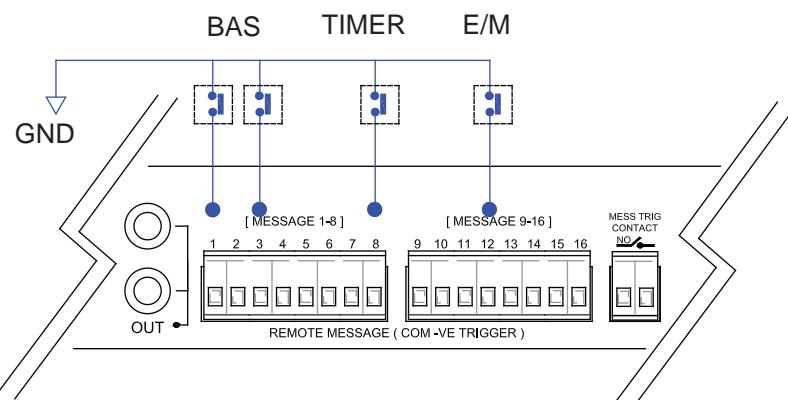
To start a playback via the front panel switches,

1. Select the Message Number ( MSG01 to MSG08 )
2. Press the button and the selected will play, with LCD indicates the time running and LED blinking.

To stop playback, press the Stop button.

The rear and front activation for MSG01 to MSG08 are paralleled. Currently there are no priority of which message is activated, with first come first go basis.

Rear port activations



Activation via rear port can be from any external device or system providing a voltage free contact.

To activate a message, the relevant port shall be grounded and the type of activation can be either pulse contact or latch.

For pulse contact ( momentarily ), a close circuit will activate the message, and while the message is being played, another incoming pulse shall deactivate the announcement.

In cases where a latched contact is provided, the message will be played for as long as the closed contact remained as such.

## Communication Ports

The communication ports available are RS232 and RS485.

RS232 is used for communication with PC for bootloading / firmware upgrades while RS485 shall be used to communicate with other devices within the system.

Further information on this section shall be available soon.

## Summary of Features

- 2 GB SD card ( Supplied )
- 8 front direct message playback buttons and 16 remote triggering
- MP3 quality of playback with balanced audio output ( with MP3 recorded files )
- Recording via dynamic microphone or line audio input
- Message assignment to front key or remote triggering port
- Playback controls mode ie. Repetitive or Play Once and manual
- Audio output setup ie. volume, treble and bass for message playback
- Dry contact port upon message triggering for interfacing to other devices

## Technical Specifications

Operating voltage	24V DC
Power consumption	1.2W
Operating temperature	0 to 40 deg
Data communication	RS485 at 19.2 kbps
Remote triggering	16 ports via dry contact
Front triggering	8 direct message playback key
Indicators	LED at switches, LCD display
Inputs	Line input; unbalanced via RCA jack Microphone input; via front phone jack
Input sensitivity	Line (1.2V, 10 K Ohm) Microphone :(0.775V 600 Ohm)
Input frequency response	Line : 80 - 19 KHz Mic : 180 - 10 KHz
Audio recording sampling rate	PCM : 64 kbps
Audio recording	Line : via RCA jack Mic recording : via front balance mic input
Playback format	PCM, MP3, WMA, etc
Memory	SD Card (Supplied with 2 GB, expandable)
Audio output	RCA unbalanced output; 1.2V XLR balanced; line 1.2V
Playback controls	Output level, Playback, Repeat, Stop, Record
S/ N ratio	80 dB
THD + N	0.1 %
Weight (kg)	2.6 kg
Dimension (W x H x D) mm	482 x 44 x 180 mm

Due to continuous product improvement efforts, amperes electronics reserves the rights to change the above specifications without prior notice.  
Periodical updates shall be posted on website.

## warranty conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics Service Centres may be asked for by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP 3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor, Malaysia or its authorized master distributor, Amperes Global Marketing. This warranty is not valid if repairs are performed by unauthorized personnel or service centres.

This warranty covers only repairs and replacement of defective parts ; cost and risks of transportation as well as removal and installation of the product from the main system are for the account of the purchaser. This warranty shall not extend to the replacement of the unit.

This warranty does not cover damages caused by misuse, neglect, accident of the product as well as using the product with power supply voltage other than shown on the product, or any other power supply source / adaptor not recommended by the manufacturer.

This warranty does not cover damages caused by fire, earthquakes, floods, lightning and every cause not directly related to the unit.

This warranty does not include any indemnity in favor of the purchaser or the dealer for the period out of use of the unit; moreover the warranty does not cover any damages which may be caused to people and things when using the product.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or on the identification label applied on the product.

This warranty covers all the material and manufacturing defects and is valid for a period of 12 months from the date of purchase or for a longer period in countries where this is stated by a national law. In this case, the extension is valid only in the country where the product is purchased.

Amperes Electronics Sdn Bhd is not obliged to modify previously manufactured products under warranty if the design changes or improvements are made.

## disclaimer

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It is recommended that all services and repairs on this product be carried out by AMPERES ELECTRONICS SDN BHD or its authorized service agents.

AMPERES series must only be used for the purpose they were intended by the manufacturer and in conjunction with this operating manual.

AMPERES ELECTRONICS SDN BHD cannot accept any liability whatsoever for any loss or damages caused by service, maintenance or repair by unauthorized personnel, or by use other than that intended by the manufacturer.